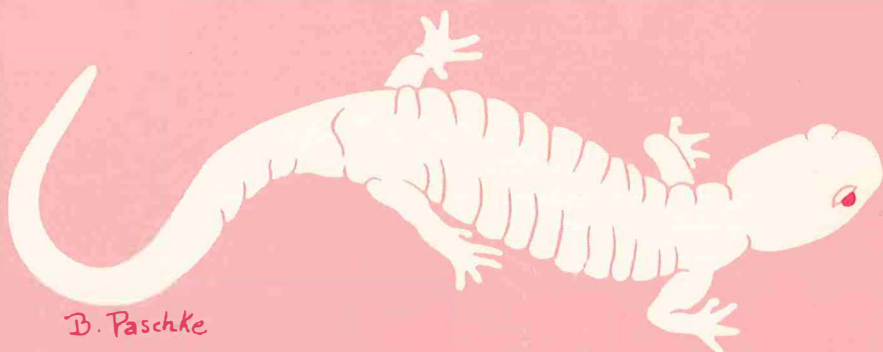


RECENT INSTANCES OF ALBINISM IN NORTH AMERICAN AMPHIBIANS AND REPTILES

by

Stanley Dyrkacz



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INTRODUCTION

Recently, considerable interest has been generated concerning albinism in amphibians and reptiles. With the increased awareness of many people, unusually colored specimens have become much in demand by zoos and the pet trade. This awareness has elicited many breeding programs and other investigations.

Hensley (1959) published a rather comprehensive list of known specimens. Brame (1962) compiled a survey on albinism in salamanders and Harris (1968, 1970) listed albinistic Maryland specimens.

Population dynamics of albino salamanders has been investigated by various authors. Collins and McDuffie (1968) surveyed a small pond in Ohio for specimens of *Ambystoma jeffersonianum*. Brandon and Rutherford (1967) investigated a small percentage of albino larval *Gyrinophilus porphyriticus* from a cave in West Virginia. Martof (1962) described numerous albinistic specimens of *Leurognathus* in southwestern Virginia. Humphrey (1967) studied the genetics of albinism in *Ambystoma tigrinum* whereas Browder (1972) investigated *Rana pipiens*. The physiological aspects of albinism have been studied by Bagnara and Obika (1964), Duncan (1962), Brunst (1968), Borack (1972) and others.

Long term breeding programs for *Elaphe g. guttata* have been documented by Bechtel and Bechtel (1962) and Groves (1965), and are still ongoing.

Gilboa and Dowling (1974), utilizing the facilities of the Herpetological Information Search Systems (HISS), presented the first computerized list of references pertinent to albinism. Livezey (1968) and Bobrowsky (1965) prepared short general discussion papers on the subject for a wide range of readers.

Although some information regarding non-North American specimens was available, it is not included. A systematic search of the literature is necessary to provide a comprehensive list of non-North American specimens.

Information concerning specimens was obtained from colleges, universities, museums, zoos and individuals. Also, an attempt was made to peruse all of the literature since Hensley. Dr. Hensley allowed me to utilize his files and I have drawn freely upon the information therein. Also, recent correspondence sent to Dr. Hensley has been forwarded.

In order to try to standardize the description of albinistic specimens, the criteria of Brame (1962), Harris (1970) and Peters (1964) has been adapted (Table 1). Partially albinistic specimens may be a combination of the different types listed. Leucistic individuals with incomplete orbital pigment are considered to be partially leucistic.

Specimens are listed in alphabetical order by families. In some cases lengthy descriptions of color hues or detailed observations on pattern or other morphological features are summarized. Ultimate disposition, if known, is noted in all cases.

Some albinistic specimens listed in the literature attained their normal pigmentation after being held in captivity. Apparently some physiological imbalance was the cause and the specimens are not genetically albinistic. These specimens have not been included.

Hensley (1959) listed specimens by species only, and this practice is continued in this investigation. Sub-specific distinctions are available in some cases; however, I felt

consistency was more important. Current nomenclature (Collins, *et al.*: 1978) is used, and published variances are indicated in those particular accounts.

Specimens have been deposited in various locations throughout North America. These facilities are listed in Table 2 and are cited in the individual species accounts. Collections with established acronyms (Duellman, *et al.*: 1978) are indicated by an asterisk. If an acronym was not listed by a respondent or publication, and if a current usage was not found, none has been indicated. The address of individuals living at private residences has not been included since these locations may be changed frequently. Private collections are listed in the appropriate accounts.

The response from zoos was limited, although many specimens are undoubtedly scattered throughout the continent. It is hoped that this publication will elicit a greater interest in documentation. Additional references can be sent to the author for a future update.

Additional references have been missed; however, rather than further delay the completion of this project I have decided to present what has been accumulated. Omission of any information is purely an oversight and the author apologizes for any that may occur.

I would like to express my deepest appreciation to Dr. Max Hensley who unselfishly turned over his records and correspondence, and assisted in many ways. Also, thanks are due to Gregory Vigle who searched the collection of the Cincinnati Museum of Natural History and to Richard S. Funk and H. Bernard Bechtel who are still contributing references whenever they are located. I would also like to thank the following people for their contributions: Ronn Altig, Richard Bartlett, Jeffrey H. Black, K. A. Booth, W. N. Bradshaw, Leon Browder, Lauren E. Brown, Stephen D. Busack, Stan Chiras, Joseph T. Collins, Robert Cooper, Michael Davenport, C. Kenneth Dodd Jr., David A. Easterla, Arthur C. Echternacht, James E. Gerholt, Regina Grebb, Frank Groves, John D. Groves, Donald E. Hahn, Herbert S. Harris, Jr., Thomas A. Huff, R. R. Humphrey, Merritt S. Keasey III, Jerry Klein, Richard L. Lardie, John C. Lewis, Robert L. Livezey, Richard B. Loomis, C. J. McCoy, V. Rick McDaniel, Edward J. Maruska, John M. Mehrrens, Bill Minnick, James B. Murphy, Max A. Nickerson, William M. Palmer, Ray Pawley, George Pisani, Dwight R. Platt, Ivo Poglayen, Russell Pyke, Neil D. Richmond, Christian R. Schmidt, Frederick W. Schueler, Frank L. Slavens, T. R. VanDevender, Jaime Villa, Ronald A. Wigal and Ralph Williams.

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TABLE 1. Degrees of albinism

Description	Terminology
Lacking all integumentary pigment (including eyes)	complete albino
Lacking all integumentary pigment (including eyes) except:	
with brassy flecking	partial albino with iridophores
with yellow pigment	partial albino with xanthophores
with red pigment	partial albino with erythrophores
with small scattered areas of normal pigmentation	albinistic pinto
Lacking all integumentary pigment (eyes normal)	leucistic

TABLE 2. Disposition of specimens

*AMNH	American Museum Natural History, New York, NY 10024 Arizona-Sonora Desert Museum, Tucson, AZ 85703
*ASU	Arizona State University, Tempe, AZ 85281 Arkansas State University, State University, AR 72467
BSTC	Ball State Teachers College, Muncie, IN 47306
BZ	Baltimore Zoo, Baltimore, MD 21217 C. Kenneth Dodd, Jr., Mississippi State University, Mississippi State, MS 39762
*CAS	California Academy of Sciences, San Francisco, CA 94118
*CM	Carnegie Museum, Pittsburgh, PA 15213
*CMNH	Cincinnati Museum Natural History, Cincinnati, OH 45202
CVGA	Cincinnati Zoological Park, Cincinnati, OH 45202
*CU ¹	Cornell University Museum, Ithaca, NY 14850
DAE	David A. Easterla, Northwest Missouri State College, Maryville, MO 64468 Diablo Valley College, Concord, CA 94518 East Texas State University, Commerce, TX 75428
HSB	Herbert S. Harris, Jr., Maryland Museum Natural History, Baltimore, MD 21218 Humboldt State College, Arcata, CA 95521 John G. Shedd Aquarium, Chicago, IL 60605 John M. Mehrrens, Columbia Zoological Park, SC 29202
JTC	Joseph T. Collins, Museum Natural History, University of Kansas, Lawrence, KS 66045 Long Beach State College, Long Beach, CA 90840
*MPM	Milwaukee Public Museum, Milwaukee, WI 53233

* proposed official acronyms (Duellman *et al.*: 1978)

¹ Cornell University Museum is also listed in the literature as CUM

NMC	National Museum of Canada, Ontario, Canada
*USNM	National Museum of Natural History, Washington, DC 20560
NZP	National Zoological Park, Washington, DC 20009
*NCSM	North Carolina State Museum, Raleigh, NC 27611
	Northern Virginia Community College, Annandale, VA 22003
	Northwestern Oklahoma State College, Alva, OK 73717
OSM	Ohio State Museum, Columbus, OH 43210
	Orange State College, Fullerton, CA 92631
*OSUMNH	Oregon State University, Museum Natural History, Corvallis, OR 97331
	Philadelphia Zoological Gardens, Philadelphia, PA 19104
	Randolph Park Zoo, Tucson, AZ 85716
RSF	Richard S. Funk, Illinois State University, Normal, IL 61761
	St. Mary's College, Moraga, CA 94556
	Steinhart Aquarium, San Francisco, CA 94100
	Tall Timbers Research Station, Tallahassee, FL 32303
	Texas A & I University, Kingsville, TX 78363
MVZ	University of California, Museum Vertebrate Zoology, Berkeley, CA 94720
UCM	University Colorado Museum, Boulder, CO 80302
*UIMNH	University of Illinois, Museum Natural History, Urbana, IL 61801
*KU	University of Kansas, Lawrence, KS 66045
	University of Maryland, Baltimore, MD 21201
*UMMZ	University of Michigan, Museum Zoology, Ann Arbor, MI 48104
	University of Western Ontario, London, Ontario, Canada
*YPM	Yale University, Peabody Museum, New Haven, CT 06520

CAUDATA

AMBYSTOMATIDAE

Ambystoma gracile

Brame (1962). A single specimen was collected near Portland, OR during April, 1958. The salamander was white with a small dark ring around the eyes and a spot near the end of the tail.

Ambystoma jeffersonianum

Reported by E. J. Maruska. An adult (CVGA #394175) and seven larvae (CVGA #394182) were collected at Mt. Washington, Anderson township, Cincinnati, OH on 7 March 1973.

Harris (1967). Numerous larvae were collected in a pond along Earnestville road, Washington Co., MD. R. Worthington collected three specimens 2 May 1964 (University of Maryland). H. S. Harris and L. R. Franz on 15 May 1966; H. S. Harris and R. S. Simmons on 23, 27 May 1965 located additional specimens. On 19 May 1966 some larvae were collected by random dipping with a net. Specimens collected during May, 1965, were preserved. AS371HSH, AS405HSH.

McDuffie (1961) and Collins and McDuffie (1968). Breeding aggregate located on the outskirts of Cincinnati, Hamilton Co. OH. Specimens were surveyed in successive years, starting in 1961. KU 144429, KU 144430.

Ambystoma maculatum

Reported by E. J. Maruska. A leucistic specimen was collected at St. Anne Convent, Melbourne, KY on 15 June 1970. CVGA #39451.

Harris (1968a). An adult was found near Conowingo Dam by Lon Ellis in Cecil Co., MD. No disposition noted.

Smith and Michener (1962). An adult male was collected on 11 April 1960 near Ithaca, Thompsons Co., NY. CUM #6704.

Ambystoma opacum

Harris (1970). Three larvae were collected at Avalon, Patapsco State Park, Baltimore Co., MD by Lee Knott and Dave Schoeberlein. One transformed (AS482HSH).

Reported by C. K. Dodd, Jr. Eight larvae were found by Ronn Altig at Noxubee National Wildlife Refuge, Noxubee Co., MS on 12 March 1975. A single specimen was preserved after death. KD #1753.

Ambystoma texanum

Easterla (1970). Two partial albinos were collected on 5 April 1969 near Puxico, Stoddard Co., MO. They had pigmented eyes. DAE #1969.

Underhill (1968). A yellowish adult specimen was observed on 11 March 1967 in a pond in Lodge Park, Piatt Co., IL but not collected. An albino egg mass was found on 24 March 1967; however, they developed into pigmented larvae.

Ambystoma tigrinum

Humphrey (1967). A female was collected in Foot Lake near Willmar, MN during August, 1962. The specimen was used in extensive breeding experiments. No disposition noted.

McDaniel (1969). An immature female was collected near Norias, Kennedy Co., TX on 27 March 1967.

Black and Collins (1977). An adult female with yellow barred markings was collected at Miniola, Clark Co., KS during November, 1974. The specimen is now on exhibit at the Oklahoma City Zoo.

Reported by C. J. McCoy. A larval specimen was collected in Overland Lake, Boulder Co., CO in 1960. UCM (apparently uncatalogued).

CRYPTOBRANCHIDAE

Cryptobranchus alleganiensis

Reported by M. Nickerson. Specimen collected in the Niangua River, near Bennet Springs, Dallas Co., MO on 29 October 1972. MPM #6560.

PLETHODONTIDAE

Aneides ferreus

Houck (1969). Two specimens were collected by Douglas Stevens during March and May, 1968 in Eureka, Humboldt Co., CA. One specimen was deposited at Humboldt State College.

***Batrachoseps major* (= *B. pacificus major*)**

Brame (1962). One specimen collected near Trabuco Guard Station, Orange Co., CA by Robert Harris on 23 February 1957.

Desmognathus fuscus

Tyning (1977). A specimen was collected at Mt. Tom, Hampden Co., MS by Thomas Tyning, Steve and JoAnn O'Neil on 13 October 1975. The salamander is currently being kept alive at the Laughing Brook Education Center, Hampden, MA 01036.

Channell and Valentine (1972). An adult was collected by Channell at Elizabeth, Wirt Co., WV on 18 April 1970. Preserved in Channell's private collection (#70WVL).

Harris (1970). A leucistic larva was collected near Pretty Boy Dam, Baltimore Co., MD during June, 1969 by David Lee. No disposition noted.

Desmognathus ochrophaeus

Reported by C. K. Dodd, Jr. A leucistic adult was collected in Clemson Forest, Pickens Co., SC. The specimen is not available.

Desmognathus wrighti

Reported by Richard B. Loomis. A specimen was collected by R. B. Loomis, H. A. Dundee and M. B. Baker at Indian Gap, Great Smoky Mountains National Park, Sevier Co., TN on 21 July 1950. Specimen lacked pigment but possessed a faint pattern. Deposited at Long Beach State College.

Eurycea bislineata

Bartley (1959). Two larvae collected at Little Flower Institute, Upper Darby, Delaware Co., PA on 22 December 1959 and 22 April 1959. No disposition noted.

Rubin (1963). An adult was collected in a tributary of Newhamny Creek, Hilltown township, Bucks Co., PA. No disposition noted.

Reported by W. M. Palmer. An adult was collected near Carolina Beach, New Hanover Co., NC during March, 1971 by R. Tregembo. NCSM #10072.

Eurycea quadridigitata

Reported by C. J. McCoy. A specimen was collected by L. H. Babbitt near Clewiston, Hendry Co., FL on 23 March 1945. CM #26603.

Gyrinophilus porphyriticus

Brandon and Rutherford (1967). Two larvae were collected in a cave in Greenbrier Co., WV. No disposition noted.

Leurognathus marmoratus

Martof (1962). A small albinistic population from the southern Appalachian Mountains, VA was studied over a six year period. An increased frequency of albinism was found. Additional studies were conducted on the occurrence by Martof and Walton (1965).

***Plethodon cinereus* (= *P.c. cinereus*)**

Harris (1968). A specimen was collected by Frank Wettle during October, 1968 at College Park, Prince George's Co., MD. Deposited in the private collection of Richard Highton (#68-524).

SALAMANDRIDAE***Taricha torosa***

Wells (1963). A single larva was collected in San Gabriel Canyon, near Azusa, Los Angeles Co., CA. Deposited at Orange State College (no catalogue number listed).

Reported by J. E. Gerholdt. Two specimens were collected during July, 1975 in Coarsegold Creek, Coarsegold, CA. Specimens were being maintained alive by Gerholdt.

SALIENTIA

BUFONIDAE

Bufo americanus

Bulmer (1975). An adult male was collected 26 August 1975 by M. Ewanish in Centerville Fairfax Co., VA. The specimen was deposited at the biology department of the Northern Virginia Community College.

Bufo terrestris

Reported by Russell Pyke. A single specimen was collected 26 April 1960 at Jacksonville, Duval Co., FL. No disposition noted.

Bufo woodhousei

Vance and Taplin (1977). A specimen was collected September, 1975 near Commerce, Hunt Co., TX. The specimen is being maintained alive at the Biological Learning Center, East Texas State University.

Reported by W. M. Palmer. A juvenile was collected June, 1965 by B. Deho at Raleigh, Wake Co., NC. NCSM #3884.

PELOBATIDAE

Scaphiopus bombifrons

Bragg and Black (1970). A single tadpole was the result of a captive mating of normal parents. The parents were collected in Cleveland Co., OK. The balance of the clutch developed normally.

Another tadpole was collected west of Altus, Jackson Co., OK. No disposition was noted.

Hughes (1963). Two partial albino females were collected on 14 June 1961 and 12 June 1962 in Lubbock Co., TX. No disposition noted.

HYLIDAE

Hyla arenicolor

Van Devender (1969). Eight adults, seven tadpoles and one newly transformed juvenile were collected 28 August 1967, 12 miles west of State Highway 17 on Ranch Road 1832, Jeff Davis Co., TX. Specimens were yellowish with slightly darker yellowish dorsal pattern. YPM #3443-3448.

Hyla regilla

Reported by Richard B. Loomis. Specimen collected September, 1956, Long Beach, Los Angeles Co., CA. Deposited at Long Beach State College.

Reported by Frank L. Slavens. Three tadpoles collected Golden Gardens Park, Seattle, WA during July, 1974. Two transformed, but all died. All have been lost.

Pseudacris triseriata

Schueler (1973). A single tadpole was collected in Ontario, Kenora District, along the north shore of the Attawapiskat River on 19 June 1971. Specimen had pigmented jaws and labial teeth with lightly pigmented eyes. NMC #15200.

LEPTODACTYLIDAE

Eleutherodactylus planirostris

Petrovic (1973). A partially albinistic adult was collected 6 January 1970 at Coral Gables, Dade Co., FL. It had a small triangular patch of pigment between the eyes.

RANIDAE

Rana berlandieri

Bragg and Black (1970). A single tadpole was observed, but escaped in the valley of Tyner Creek, northeast of Proctor, Adair Co., OK. No dates given.

Rana boylii (= *R. b. boylei*)

Switak (1967). A subadult which was collected as a tadpole in Portola Valley, CA. Albino with pigmented blotches on the body. Maintained by the Steinhart Aquarium.

Rana cascadae

Altig and Brodie, Jr. (1968). Thirteen tadpoles were collected between 17 July and 4 September 1965 in Tree Creek Lake, Deschutes Co., OR. All were yellowish-white with pink eyes. OSUMNH-10236-48, OSUMNH-10249-53.

Rana catesbeiana

Echternacht (1964). A specimen was recorded from Arizona. No data given. ASU #61-126.

Reported by S. Dyrkacz. A single specimen was obtained from a local farmer by R. Dury, in Hamilton Co., OH during the summer of 1960. KU #144566.

Harris (1968a). Numerous tadpoles and recently transformed frogs were collected near Magnolia Avenue and Silver Springs Rd., Baltimore Co., MD. AF151HSH, AF155HSH, AF191HSH. Tadpoles were collected in Frederick Co. No disposition noted.

Reported by E. J. Maruska. Newly transformed adults collected 10 October 1971, Allentown, PA. Preserved on 12 October 1973. CVGA-3096, CVGA-3098.

Bragg and Black (1970). Two specimens found in a pool near Seminole, Seminole Co., OK. No disposition noted.

Switak (1967). An adult was collected in Cloverdale, CA. (No data). Maintained alive by the Steinhart Aquarium.

Peters (1962). Twenty-six specimens collected 25 May 1960 at San Leandro Creek, Alameda Co., CA. Specimens were yellowish-white with red pupils and silver gray irises. Deposited St. Mary's College, Diablo Valley College and author's private collection.

Rana clamitans

Reported by J. Klein. Four tadpoles collected at Oak Ridge, TN during April-May, 1975. All transformed and died within ten days. Coloration was yellowish-white changing slowly to light yellow, eyes were bright orange. No disposition noted.

Rana pipiens

Rose (1962). Thirteen tadpoles collected (died in captivity). No disposition noted.

Browder (1972). Immature male collected by L. Koffler in Groton, SD (no date given). The frog was cream colored with yellow-orange spots, the eyes were pink with gold iris. The specimen was used in breeding experiments, and ultimate disposition was not noted.

TESTUDINES

CHELYDRIDAE

Chelydra serpentina

Reported by John Lewis. Two hatchlings collected in St. Petersburg, Pinellas Co., FL. First was found during 1969 and the second on 8 September 1976.

Reported by Ivo Poglayen. A hatchling was collected in a small lake near Louisville, KY. It died February, 1976, and apparently was deposited at the Randolph Park Zoo.

Judd (1971). A specimen was collected near London, Ontario, Canada on 7 September 1970. It was a single albino among seven normal hatchlings. University Western Ontario (Department Zoology).

Reported by C. J. McCoy. A specimen collected at Bybee, Madison Co., KY on 12 September 1966 by Branley A. Branson. CM #46225.

Reported by G. Vigle. A hatchling was collected during the spring, 1975 in Butler Co., OH. USNM #203839.

Braker (1962). A specimen was collected by Keith Young and Philop Topcik in the Buckley Hills area of Waukegan, Lake Co., IL during September, 1961. The turtle was kept at the John G. Shedd Aquarium until its death in 1963. Disposition was not noted.

TESTUDINIDAE

Chrysemys concinna

Reported by J. B. Murphy. A hatchling was collected at Lost Lake, Pilot Point, TX during May, 1975 by Randy Hunt. The turtle is presently being maintained alive at the Dallas Zoo.

Chrysemys floridana

Reported by E. J. Maruska. A specimen was received at the Cincinnati Zoo in March, 1975.

Clemmys guttata

Harris (1970). An albino was hatched (1 August 1969) from a clutch of eggs deposited by a female collected near Croom, Prince George's Co., MD. The partially leucistic female was collected by Chris Dodge.

Gopherus agassizi

Reported by K. A. Booth. Four hatchlings from captive matings were found during October 1976. Currently being maintained alive.

Keasey (1975). Two hatchlings were collected in a backyard in Tucson, AZ by F. Fox. The first was found on 1 October 1974 and the second 1 October 1975. Being maintained alive by the Arizona-Sonora Desert Museum.

Terrapene ornata

Reported by J. M. Mehrrens. A hatchling was collected in Victoria, TX in 1969. The turtle has the pale yellow marking typical of the species, and is being maintained alive by Mehrrens.

Bigham and Lardie (1976). A hatchling was collected by Mrs. Benningfield in Alva, Woods Co., OK during April, 1970. Northwestern State College (no number given).

SAURIA

SCINCIDAE

Eumeces fasciatus

Brungs and Britt (1960). A juvenile was collected at Resthaven Wildlife Refuge, Erie Co., OH during August, 1958. The groundcolor was pink with five light colored stripes. OSM #1016.

ANGUIDAE

Ophisaurus ventralis

Reported by Ralph Williams. A specimen was collected near Carlotta Drive, Duval Co., FL on 13 July 1974. During life it had a yellowish-white coloration with pink eyes and tongue. It was maintained alive until 14 January 1975 at the Jacksonville Zoological Park. The lizard was not preserved after death.

IGUANIDAE

Phrynosoma coronatum

Shaw (1963). A hatchling was deposited at the San Diego Zoo on 1 July 1960 after being collected at El Cajon, CA by Velva E. Peet. It had a pale yellowish groundcolor with pink eyes. It was preserved in L. M. Klauber private collection (#44118).

Sceloporus olivaceus

Hensley (1968). A leucistic specimen was collected by Harold Laughlin during 1960. It was found near Sinton, San Patricio Co., TX. No disposition was noted.

Sceloporus undulatus

Hensley (1968). During August, 1966 a juvenile was collected at Charlotte, Mecklenburg Co., NC by John Bos. The lizard is preserved in Hensley's private collection.

SERPENTES

COLUBRIDAE

Arizona elegans

Harris and Simmons (1968). A juvenile female was collected in the San Felipe Valley, Anza-Borrego State Park, San Diego Co., CA during June, 1965. Its groundcolor was pinkish white with brownish pink pattern. The eyes were pink. RS618HSH.

Reported by Dwight R. Platt. An adult male was collected on 30 May 1969 at the Sand Prairie Natural History Reservation, Burrton, Harvey Co., KS. It was a complete albino without any trace of pattern. The specimen was released at the sight of capture.

Funk (1965). A hatchling was collected AOR near the International boundary in San Luis R.C. RSF 31147.

Carphophis amoenus

Harris (1968b). A specimen was collected at Damaacus, Montgomery Co., MD by E. R. Okleson during 1959. The snake died 11 December 1959. (#18014NZP) and apparently is now catalogued USNM #145372.

Coluber constrictor

Reported by Greg Vigle. A juvenile specimen was collected during Spring, 1946 near Cincinnati, Hamilton Co., OH. CMNH #2652.

Reported by E. J. Maruska. A specimen was collected at Mr. Airy Forest, Cincinnati, OH and was received at the Cincinnati Zoo in September, 1970. It is currently being maintained alive at the zoo.

Reported by Michael Davenport. Two specimens were born in captivity from a female collected in MD near Washington, DC. Obtained by the NZP on 22 August 1973.

Capron (1977). A specimen was collected at Oxford, Sumner Co., KS on 16 September 1977. Currently being maintained alive by H. Bernard Bechtel.

Diadophis punctatus

Groves (1974). An adult male was collected by T. Marshall at Indian Mills, Burlington Co., NJ on 5 July 1974. The snake was pinkish white dorsally with a broken orange stripe on the neck. No disposition noted.

Bradshaw (1966). A juvenile was collected near Morgantown, Monongalia Co., WV during October, 1965.

Reported by John Lewis. Specimen was found dead in a recently plowed field in Pinellas Co., north of Clearwater, FL during the Spring, 1978. No disposition noted.

Bryant (1974). A partially albinistic adult with a normal neck ring and a yellowish belly was collected near Camp Bradford, Martinsville, Morgan Co., IN on 5 October 1974. Disposition not noted.

Elaphe guttata

Bechtel and Bechtel (1962). Described an ongoing breeding program that resulted in the birth of seven albinos.

Groves (1965). Six albinos produced through captive breeding at the Baltimore Zoo. Pers. Com. described a large-scale program since 1963.

Reported by R. A. Grebb. Two juveniles being maintained alive by William B. Allen, Jr. Hatched at the Baltimore Zoo (July, 1976).

Bechtel(ms). Two hatchlings and a gravid female were collected by L. Porras in Hialeah, Dade Co., FL during 1962. A specimen was brought to the Miami Serpenterium which had been collected at Key West, Monroe Co., FL (no date given). A single specimen was collected during 1973 near Memphis, Shelby Co., TN.

Reported by H. B. Bechtel. An adult male was collected AOR (subsequently died in captivity), in Franklin Co., FL by Bruce Means. Apparently preserved at Tall Timbers Research Station.

Reported by R. D. Bartlett. A hatchling was collected near Myakka State Park, Sarasota Co., FL during July, 1973. This female is being maintained alive by the collector for breeding purposes.

Chapman (1965). Four albinos were hatched in captivity, and one survived past a few weeks. The single specimen was described as having a light pink groundcolor with darker pink blotches. The venter was dark cream colored without blotches. No disposition or collection date was given.

Elaphe obsoleta

Tanzer (1965). A complete albino was collected near College Station, Brazos Co., TX on 17 September 1961 by B. Hardeman. Preserved in the author's collection (#1234).

Reported by M. A. Nickerson. A specimen was collected near Cincinnati, OH during 1973. No disposition is noted.

Reported by F. Groves. Three specimens used for breeding purposes at the Baltimore Zoo (R69-23, R76-30 and R76-29). R69-23 was collected at Glenwood, Howard Co., MD as a young adult by C. H. Wilson (also cited Harris 1968). R76-29 and R76-30 hatched in captivity by back-crossing to parent. Two additional specimens from back-crossing sent to H. B. Bechtel and Philadelphia Zoo.

Reported by S. Dyrkacz. Juvenile lacking all body markings. Collected in Coleraintownship, Hamilton Co., OH on 13 September 1960 by D. Haggard (DOR). KU #144773.

Goodrich (1978). An adult was collected June, 1961 at Log Cabin State Park, Coles Co., IL and preserved in the collection of Eastern Illinois University, Charleston, Illinois. The specimen had pale orange blotches and a pale cream groundcolor. The eyes and tongue were pink.

Reported by J. B. Murphy. An adult specimen is being used for breeding experiments at the Dallas Zoo. It was collected at Garland, TX during September, 1968. Seven red eyed, heterozygous young were hatched in 1976.

Reported by E. J. Maruska. Two specimens were hatched at the Cincinnati Zoo in October, 1969. The female was from the Cincinnati area, and the juveniles are being maintained alive.

Reported by W. M. Palmer. Adult male collected Bryantown, Northampton Co., NC on 3 June 1970.

Reported by M. A. Nickerson. Specimen collected northwest of McNeil, Columbia Co., AR on 15 October 1974. MPM #8752.

Reported by G. Vigle. Juvenile collected in Union township, Clermont Co., OH by Woody Goodpaster on 15 October 1933. CMNH #1235.

Harris (1968a). Juvenile specimen collected June, 1964 on Marley Road, near Solly, Anne Arundel Co., MD. Whitish with pink eyes and melanin present on a few scales. Donated to the Baltimore Zoo.

Heterodon platyrhinos

Reported by H. B. Bechtel. A specimen was collected in South Carolina during 1975. Currently being maintained alive by Bechtel.

Van Devender (1967). A juvenile male collected October, 1963 near Port Neches High School, Port Neches, Jefferson Co., TX. Author's private collection #85.

Reported by James B. Murphy. A juvenile specimen was found dead in the Dallas area. It was not saved.

Lampropeltis calligaster

Collins (1960). A complete albino collected near Cedartown, Polk Co., GA on 15 January 1960. JTC #80 (currently KU #144793).

Reported by J. B. Murphy. Four specimens were collected in the Dallas area. The Dallas Zoo is maintaining a single specimen that was collected in Mesquite, TX by Joe Hughey on 6 September 1977.

Lampropeltis triangulum

Reported by M. A. Nickerson. Collected near Toledo, OH during the Spring, 1974. The specimen was xanthic. Disposition uncertain.

Reported by M. A. Nickerson. Collected near Ridgeland, SC by David Burge. Disposition uncertain.

Reported by S. Dyrkacz. Specimen collected as a hatchling in Campbell Co., KY. Listed in the catalogue KU #144812. Specimen not examined.

Reported by G. Vigle. Juvenile collected at Sedamsville, Cincinnati, Hamilton Co., OH on 15 June 1941. CMNH #1667.

Reported by C. J. McCoy. Juvenile collected near Pittsburgh, Allegheny Co., PA on 15 October 1958 by Nancy Dewald. CM #16538.

Lampropeltis getulus

Switak (1967). A subadult collected in Madera, CA. Steinhart Aquarium.

Reported by F. Groves. A specimen was collected near Norrisville, Hartford Co., MD by a Mrs. Potocki on 9 September 1958. The snake had a white groundcolor with light orange dorsal blotches, bordered with light gray. Ventral blotches light gray or slightly pink, the eyes were pink. The specimen was donated to the Baltimore Zoo (BZ #248).

Nerodia fasciata

Byrd and Hanebrink (1977). A female was collected west of Weiner, AR during September 1973. The snake was white with pink eyes and yellow reflecting guanophores. Arkansas State University (ASU #1680).

Reported by W. M. Palmer. Two babies were born from a normal female that was collected at Laurel Lake, near Salemburg, Sampson Co., NC (late summer 1958). The disposition of the specimens is not certain.

Nerodia sipedon

Reported by E. J. Maruska. A juvenile was collected south of Marion, IN on 28 July 1969. It was preserved on 31 March 1974 (CVGR #3399).

Pituophis melanoleucas

Echternacht (1964). Four adult specimens were reported. ASU #6, #61-078, #62-025, #62-401.

Reported by M. A. Nickerson. A small population of albinos was mentioned as occurring in Paradise Valley, north of Scottsdale-Phoenix, Maricopa Co., AZ.

Reported by M. S. Keasey III. Two specimens hatched in captivity as the result of the breeding of albinistic parents. The two males hatched on 25 August 1970 and 3 August 1971. Both are being maintained alive at the Arizona-Sonora Desert Museum. The parents were collected within the city limits of Tucson, AZ on 16 April 1964 (Female) and 24 November 1962 (Male).

Reported by F. Groves. A specimen was collected in the Moraga Valley, Contra Costa College, CA in the Fall of 1967. It was light straw colored with light reddish dorsal markings and pink eyes. It was received in trade to the Baltimore Zoo from the Steinhart Aquarium.

Reported by John Lewis. Collected 1974-1975 in central Florida. Currently in a private collection in Tampa, FL.

Cresswell (1971). Two partial albinos (with dark eyes) were hatched in captivity from eggs deposited by a normal female. The female was collected fifty miles north of Atlanta, Pickens Co., GA. The eggs hatched in September, 1971. Currently being maintained alive by the author.

(=P. c. catenifer)

Leviton and Kessel (1958). A specimen was collected at Anita Bucy, Southwest of Novato, Marin Co., CA (no date). CAS #85185.

Switak (1967). Two adults exhibited, collected at San Rafael and San Leandro, CA. (no date). Steinhart Aquarium.

Regina septemvittata

Reported by Robert Cooper. A specimen was collected near Bluffton, Wells Co., IN on 19 June 1962. BSTC #476.

Sonora semiannulata

Echternacht (1964). Adult male collected in west Phoenix, Maricopa Co., AZ during August, 1962. ASU #63-15.

Storeria dekayi

Thrall (1972). A specimen was collected west of Lexington, McClean Co., IL during June, 1969 by Barbara Gardener. Preserved in the private collection of the author (JHT #33).

Thamnophis butleri

Reported by M. A. Nickerson. A specimen was collected at St. Francis, Milwaukee Co., WI on 11 October 1938. MPM #2600.

Thamnophis elegans

Banta and Hahn (1966). A juvenile female was collected in the San Luis Valley, near South Fork, Rio Grande Co., CO. No disposition noted.

Reported by C. J. McCoy. A specimen was collected at Grand Junction, Mesa Co., CO on 20 August 1960 by R. L. Hoover. UCM #15296.

Reported by H. Smith, *et al.* (1975): a female specimen from 88 Riverview Drive, Durango, La Plata County, Colorado; collected 14 May 1975. (UCM - number not reported)

Thamnophis radix

Reported by R. Pawley. A juvenile was received at Brookfield Zoo on 23 October 1975. It had been collected in Kuhman Forest, Yorkville, IL and is being maintained alive at the zoo.

Dyrkacz (1975). A juvenile was collected 21 September 1973 in Chicago, Cook Co., IL by Laura Strezo. The specimen was white with pale yellow stripes and pink eyes. The snake is deposited in the author's private collection SD #058.

***Thamnophis proximus* (= *T. sauritus proximus*)**

Rose (1959). An adult was collected on 13 August 1958 at Waco, McLennon Co., TX by R. Donnell. UMMZ (no number indicated).

Thamnophis sirtalis

Reported by M. A. Nickerson. A specimen was collected near Mongo, IN during 1974. Ultimate disposition is not known.

Kramer (1960). A juvenile was collected in Sedalia, Pettis Co., MO on 8 October 1960 by Stephen Kramer. The lateral and dorsal stripes were pale yellow with pale reddish bars. In 1960 the snake was being maintained alive by the author.

Reported by Neil D. Richmond. A juvenile specimen was collected near Johnston, Cambria Co., PA on 21 September 1968 by J. T. Rothrock. The snake was cream colored with pink eyes. The lateral stripes were white. CM #48368.

Reported by Frank Slavens. A baby was collected near Bellingham, WA by Bob Miller. Specimen donated to Washington Public Zoo on 23 August 1972 (died 12 March 1973).

Reported by M. A. Nickerson. A female collected near Toledo, OH during May, 1972 gave birth to three albinos. Specimens were also collected near Abion and Mongo, IN during 1974. An adult was found near Sedalia, Pettis Co., MO during 1965. Ultimate disposition of the specimens is uncertain.

Harris (1970). A partially leucistic specimen was collected near Frostburg, Allegany Co., MD on 23 May 1962. Another specimen was collected on 13 September 1961 south of Westport off Hollins Ferry Road, MD.

Anonymous (1966). A leucistic specimen was collected near Trappe, PA during 1965. In life the eyes were steel gray without trace of pattern. The tongue and mouth were pale pink. The snake died August, 1966 and the disposition was not noted.

Groves (1976). A juvenile was collected by P. W. Cope and C. Kashner in a field near Dansville, Montour Co., PA on 3 November 1974. The ground-color was creamy white with translucent skin between the scales. Philadelphia Zoological Gardens.

Reported by G. Vigle. An adult was collected in the neighborhood of Clifton, Cincinnati, Hamilton Co., OH by Carl Wilson during October 1948. CMNH #2659.

Reported by E. J. Maruska. A specimen was collected in the Cincinnati area and deposited at the Cincinnati Zoo during June, 1975.

Reported by Ronald A. Wigal. A juvenile was collected in Cabin Creek, Kanawha Co., WV on 6 October 1975. Specimen is to be deposited at the West Virginia Biological Survey, Marshall University.

Tropidoclonion lineatum

Reported by J. B. Murphy. A specimen was collected in the Brookhaven area, Farmer's Branch, TX on 25 April 1975 by Paul Moore. The snake is being maintained alive by the Dallas Zoo.

Virginia striatula

Palmer and Braswell (1976). An adult was collected by Michael Setaro, Tillman, Jasper Co., SC on 7 April 1976. The parietal band and tongue were light tan or salmon, the eyes were pink. NCSM #16413.

CROTALIDAE***Crotalus atrox***

Reported by Frank Groves. A male and female were received at the Baltimore Zoo from the Houston Zoo on 10 February 1975. Both have white ground color with faint yellowish dorsal blotches, the eyes are pink.

Reported by E. J. Maruska. A specimen was collected in TX and received at the Cincinnati Zoo during November, 1969.

Reported by Stan Chiras. A male and female are being maintained for breeding purposes. No data available.

Crotalus horridus

Arnold (1963). A specimen was collected on 21 May 1961 near Canton, IA by Galen Hein, Steve Miller and Byron Arnold. The groundcolor was light tan, the tail black. The dorsal bands were replaced by double rows of light spots. No disposition noted.

Grube (1963). A specimen was collected by J. D. Young and F. Brown on 12 May 1962 in Tioga Co., PA. The tail was black with pale bluish gray eyes and a light colored pattern. No disposition noted.

Crotalus viridis

Chace and Smith (1968). Two adults were collected near Mobridge, SD during the Fall, 1965. UIMNH #78029, #78030.

Switak (1967). Subadult on exhibit from Conn Dam, East of St. Helena, CA. Steinhart Aquarium.

Boles (1971). A newborn specimen was collected on 15 November 1960 in the Scott County Park area, KS. At the time of publication the specimen was still alive at Emporia State Teachers College, Emporia, KS. McLeran (1972) published a photograph of the snake which has been named "Alabaster".

Sistrurus catenatus

Reported by S. Dyrkacz. Juvenile specimen collected in Ellsworth Co., KS. In preservation the groundcolor was light tan with distinct although pale blotches, the eyes were dark. KU #1638.

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2. Guía de Técnicas de Preservación de Anfibios y Reptiles por George R. Pisani y Jaime Villa. Pp. 1-28. April 1974. \$.35.
3. Collections of Preserved Amphibians and Reptiles in the United States compiled by the Committee on Resources in Herpetology. Pp. 1-22. July 1975. \$1.50.
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